

DEVELOPMENT OF A FUNCTIONAL BEVERAGE BASED ON FOOD BY-PRODUCTS, ENRICHED WITH BLACKCURRANT POWDER: TECHNOLOGICAL AND EXPERIMENTAL ASPECTS

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Abstract

Functional foods are also referred to as "foods of the future" since they are defined as foods that, while still being categorized as food, have additional advantageous components that can enhance bodily health in addition to their present fundamental nutritional value. Brewery spent malt, rye bread, and blackcurrant pomace powder are three food industry byproducts that were valorized to create the novel functional beverage known as ROOTS. The study's objectives were to use the HACCP system for food safety, optimize the technological manufacturing process, and qualitatively characterize the finished product. The technological process included the stages of infusion, controlled fermentation and pasteurization, identified as critical control points. The results demonstrated that the obtained beverage has an average pH of 3.9, alcohol content <0.5% vol., high antioxidant activity and a balanced sensory profile. The product is part of current trends in circular economy and sustainable consumption, offering a functional, natural and sustainable alternative to conventional beverages.

Keywords: functional beverage; food by-products; controlled processes; food safety.